

# Energy Saving and Fresh Air

—EKCW Series Brushless DC Fan Coils



EKCW series brushless DC fan coils

Model: EKCW200A~EKCW1200A

Air flow: 170~2040m<sup>3</sup>/h

***EUROKLIMAT Air Conditioner,  
 Environmental & Energy-saving Technology from Europe.***

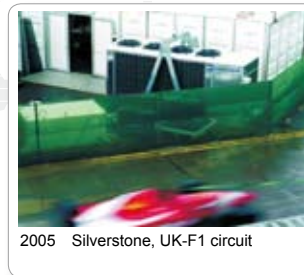
EUROKLIMAT (EK) was established in 1963 in Italy. For the past half a century, it has become famous as an energy-saving air-conditioning manufacturer in Italy and globally. Continuous innovation, new product development and top manufacturing quality are the driving force behind this growth.

EUROKLIMAT (EK) pursues the ideals of protecting the environment, providing physical comfort and adopting energy-saving into the whole process of product R&D, manufacturing and service. Our products covering residential, commercial and close control air-conditioner are manufactured according to the global generally accepted standards.

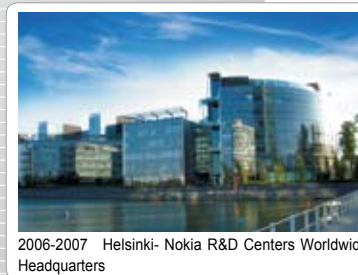


2007 Berlin-Allianz Assurance

			
ISO9001: 2008 corporate certification	ISO14001: 2004 Environmental management system certification	Product Manufacturing License (XK06-015-00361)	State-certified Lab CNAS L5123



2005 Silverstone, UK-F1 circuit



2006-2007 Helsinki- Nokia R&D Centers Worldwide  
 Headquarters



EK Italia Headquarters



2011 Shanghai Institute of Quality Inspection and Technical Research



2009 ZTE Nanjing R&D Center



2011 Avic Shenyang Aircraft Corporation



2009 Chongqing Xu Yang Lang Qing Plaza



2009 China-Wal-Mart



2010 Beijing - Control and Propulsion Lab of China Aerospace Corporation



2011 Shenzhen International Airport - Terminal 3



2010 Shenyang International Exhibition Center



## EKCW Series Brushless DC Fan Coils



EKCW series brushless DC fan coils use the latest patented brushless DC technologies developed jointly by EUROKLIMAT (EK) and China Aerospace Science & Industry Corp (CASIC) and the leading-edge air processing technologies to implement stepless speed regulation. These fan coils can automatically regulate the rotation speed of motors based on the indoor load variation to maximize energy saving (saving energy by more than 65% compared with common fan coil systems). More than 300 models in the full series of units are available for customers.



In 1917, Dr. Bolgior proposed the use of rectifier tube instead of mechanical brush, generating the basic idea for brushless DC motors.

In 1955, Engineer D.Harrison applied for the first patent for mechanical brush, marking the emergence of brushless DC motors.

In 1978, brushless DC motors and their drivers were formally publicized and became an application focus of energy saving in Europe.

In 1981, EUROKLIMAT formally and comprehensively publicized brushless DC technologies in the terminal domain.

In 1986, Engineer H.R.Bohon systematically and comprehensively summarized brushless DC technologies, marking the emergence of a proven theory about brushless DC technologies.


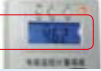




In 2010, EK joined hands with CASIC to develop industry-leading brushless DC motors and control technologies, which were patented.

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**Efficient and Energy Saving**

The unit is designed and manufactured to work with EK's efficient heat exchangers. Compared with the fan coil of a traditional AC motor, the unit saves energy by more than 65% as a whole, reducing the energy consumption for the entire HVAC system by 14%–18%.

Taking EKCW400AC1 as an example:

		<b>High rotation speed:</b> Traditional fan coil - 64.0 W Brushless DC fan coil - 46.2 W
		<b>Medium rotation speed:</b> Traditional fan coil - 56.9W Brushless DC fan coil - 20.9W
		<b>Low rotation speed:</b> Traditional fan coil - 46.1W Brushless DC fan coil - 8.4W

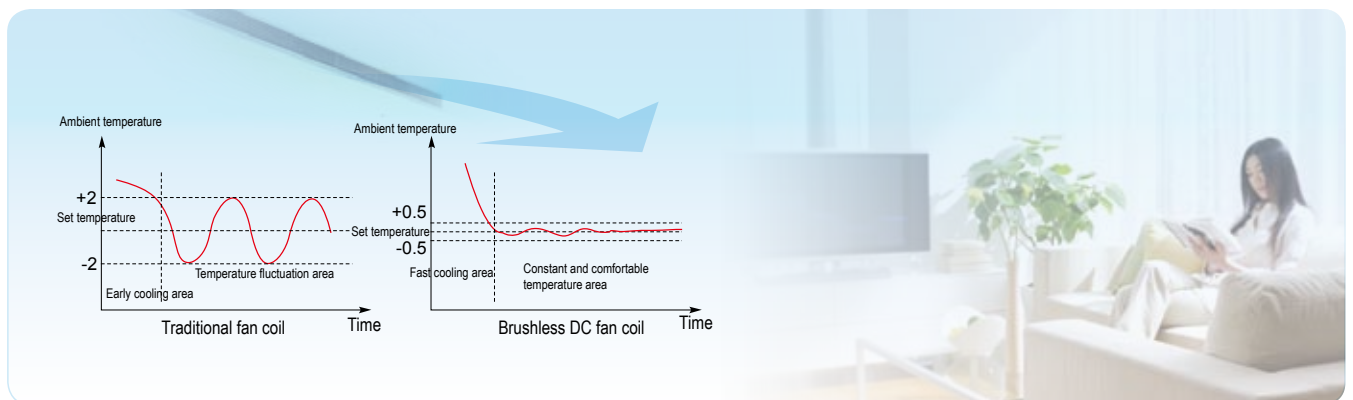
	High rotation speed	Medium rotation speed	Low rotation speed
Traditional fan coil	64.0W	56.9W	46.1W
EK's brushless DC fan coil	46.2 W	20.9 W	8.4 W
Energy Saving	27.8%	63.3%	81.8%
Test Results	The unit saves energy by 20%–35% at the nominal high rotation speed, by 45%–65% at the nominal medium rotation speed, and by 65%–85% at the nominal low rotation speed.		

Generally, a fan coil reaches the set temperature within one hour after power-on, and then runs at a low or medium speed. Objective calculation shows that EKCW series brushless DC fan coils save energy by 65% compared with traditional fan coils.

**Fast Cooling/Heating**

Due to a major difference between the indoor temperature and the set temperature in the initial phase of power-on, the powerful cooling/heating function of the unit can regulate the indoor temperature to the set one within a short period and control the air flow based on the actual load of the room, saving energy and generating less noise.

Due to a low temperature control precision ( $\pm 2^{\circ}\text{C}$ ), traditional fan coils usually require a set temperature of  $20^{\circ}\text{C}$ – $22^{\circ}\text{C}$  to prevent unpredictable temperature changes in hot summer. Due to a high temperature control precision ( $\pm 0.5^{\circ}\text{C}$ ), EKCW brushless DC fan coils allow a set temperature of  $26^{\circ}\text{C}$  (comfortable temperature).



**Constant Temperature and Comfort**

EKCW brushless DC fan coils can perform proportion integration (PI) calculation based on the variation between the indoor temperature and the set temperature. These fan coils can intelligently adjust the rotation speed and air supply volume of motors within a wide range, and provide a temperature control precision of  $\pm 0.5^{\circ}\text{C}$ , creating real and comfortable indoor environment with constant temperature.



EKCW brushless DC fan coils feature the unique sleep mode, in which the lowest noise level is only 18 dB(A), creating comfortable indoor environment with constant temperature for customers and providing a fresh and comfortable 3-D sleep space.

**Strong Dehumidification**

Traditional fan coils support the following operation modes: cooling, heating, and air supply (high/medium/low).

EKCW series brushless DC fan coils support the following operation modes: cooling, heating, **dehumidification**, air supply, **auto control**, **sleep**, **strong cooling**, **strong heating**, **strong dehumidification**, **timing setting**, **fire alarm**, **automatic temperature control in standby mode**, **2-way/3-way valve protection**, and **network-based control (RS485)**.

**Optional accessories:** PTC electric heater, UV+photocatalyst for sterilization, condensate water lifting pump, and anti-blocking float switch.



- Cooling
- Heating
- Dehumidification
- Air supply
- Auto control



**Adjustable Static Pressure**

Traditional fan coils adapt to only one outlet static pressure. If the on-site static pressure is improper, the motor must be replaced. EKCW series brushless DC fan coils can adapt to the outlet static pressure of 0–50 Pa. The outlet static pressure can be directly adjusted on site based on temperature controller settings without replacing the motor.



**Smooth Operation and Low Noise**

The unit uses a forward-pitched multi-wing centrifugal fan with double-suction impellers made from zinc-plated steel plates, featuring low noise, high wind speed, and smooth operation, and achieving the best result of air supply.



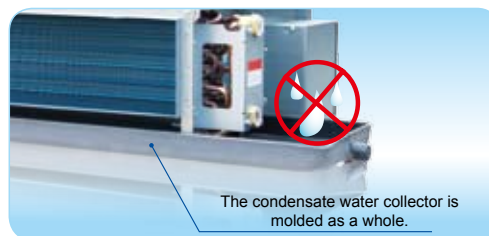
**High Quality and Reliability**

All coils use shutter-type hyperbolic and hydrophilic fins made from mechanically expanded quality copper tubes specially designed for air conditioners. All coils are subject to leakage-free test under a pressure of 3.3 MPa, and are strictly inspected before they leave the factory, ensuring high performance and reliability.



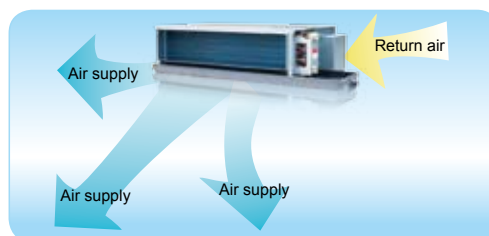
**No Condensation**

The unit uses a condensate water collector that is molded as a whole, and features enhanced heat preservation for the water collector and innovative batter drainage structure, effectively eliminating generation and dripping of condensation.



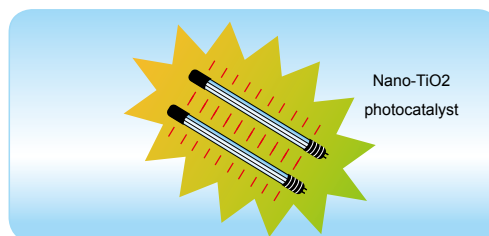
**Even Air Supply**

The unit features a rational air flow design for air supply and return so that air is evenly supplied to all corners of the room, making the room feel comfortable.



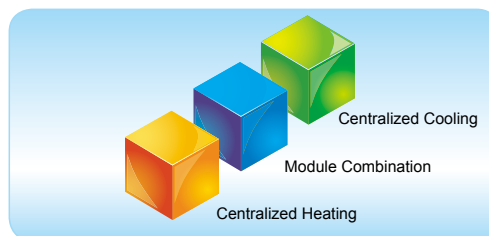
**Efficient Sterilization**

The unit uses sterilization technologies of nano-TiO<sub>2</sub> photocatalyst to achieve a sterilization rate of 95%, considerably improving the air quality for work and life.



**Flexible Application**

The unit features the single-area controlled design, and therefore can match the master unit of any central air conditioning systems with centralized cooling/heating.



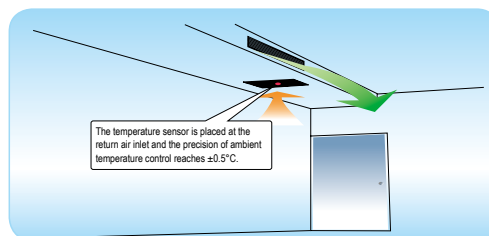
**Easy Installation**

With a compact, graceful, and robust design, the super-thin (only 230 mm thick) unit can be easily installed.



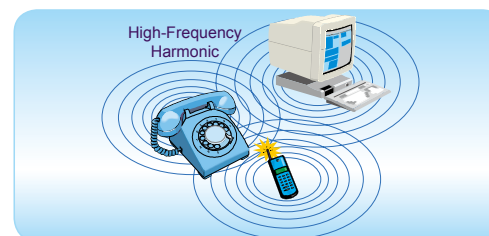
**Leading-edge Control Technologies**

The unit uses industry-leading water system control technologies and temperature control technologies to save energy during system operation.



**No Electromagnetic Interference**

The unit does not generate high-frequency harmonic and electromagnetic interference during stepless regulation. Therefore, the unit can be widely used in places with strict anti-interference requirements for power supply, including computer rooms, telecom base stations, TV and broadcast receiving stations, and communication equipment rooms.





Nomenclature

**EKCW**   **200**   **A**   **C**   **3**   **R**   **C**   **X**   **D**   **A**   **0**   **A**   **C**  
 1            2            3            4            5            6            7            8            9            10          11          12          13

1. EKCW EK fan coil unit
2. 200 Rated air flow of the unit
3. A Horizontal concealed fan coil
4. C Coil type      T-2C0H                      C-3C0H                      F-4C0H                      M-2C1H                      N-2C2H  
 H-3C1H                      D-3C0H (units for large temperature drop and small flow)  
 A-4C0H (units for large temperature drop and small flow)  
 (Note: C -- chilled water coil; H -- hot water coil)
5. 3 Outlet static pressure:                      1 - 12 Pa;                      3 - 30 Pa;                      5 - 50 Pa
6. R R: Orientation of connection pipe:      R - Right (toward air outlet);                      L - Left (toward air outlet)
7. C Code for return air plenum:                      C - no return air plenum (standard);  
 B - backward return air plenum;                      D - downward return air plenum
8. X X - no filter;      F - nylon filtering screen with aluminum alloy frame
9. D Motor code:      D - brushless DC motor
10. A Code for water collector (see Table for Water Collector Codes)
11. 0 Code for built-in electric heater:                      0 - no electric heater; 1 - electric heater of 1.0 kW (so on and so forth)
12. A Power supply: A-220V~/50Hz
13. C Market code:      C - Mainland China

Table for Water Collector Codes

Code	Material	Heat Preservation	Length
A	Common cold-rolled sheet	7 mm thick (made of PE)	Standard length
B	Common cold-rolled sheet	7 mm thick (made of PE)	Water collector extended by 100 mm
C	Common cold-rolled sheet	7 mm thick (made of PE)	Water collector extended by 200 mm
D	Common cold-rolled sheet	7 mm thick (made of PE)	Water collector extended by 300 mm
E	Stainless steel	7 mm thick (made of PE)	Standard length
F	Stainless steel	7 mm thick (made of PE)	Water collector extended by 100 mm
G	Stainless steel	7 mm thick (made of PE)	Water collector extended by 200 mm
H	Stainless steel	7 mm thick (made of PE)	Water collector extended by 300 mm
I	Common cold-rolled sheet	6 mm thick (Class 1 Armaflex)	Standard length
J	Stainless steel	6 mm thick (Class 1 Armaflex)	Standard length
K	Common cold-rolled sheet	6 mm thick (Class 0 Armaflex)	Standard length
L	Stainless steel	6 mm thick (Class 0 Armaflex)	Standard length
M	Common cold-rolled sheet	6 mm thick (Class 1 Armaflex)	Water collector extended by 100 mm
N	Stainless steel	6 mm thick (Class 1 Armaflex)	Water collector extended by 100 mm
P	Common cold-rolled sheet	6 mm thick (Class 0 Armaflex)	Water collector extended by 100 mm
Q	Stainless steel	6 mm thick (Class 0 Armaflex)	Water collector extended by 100 mm
R	Common cold-rolled sheet	6 mm thick (Class 1 Armaflex)	Water collector extended by 200 mm
S	Stainless steel	6 mm thick (Class 1 Armaflex)	Water collector extended by 200 mm
T	Common cold-rolled sheet	6 mm thick (Class 0 Armaflex)	Water collector extended by 200 mm
U	Stainless steel	6 mm thick (Class 0 Armaflex)	Water collector extended by 200 mm
V	Common cold-rolled sheet	6 mm thick (Class 1 Armaflex)	Water collector extended by 300 mm
W	Stainless steel	6 mm thick (Class 1 Armaflex)	Water collector extended by 300 mm
X	Common cold-rolled sheet	6 mm thick (Class 0 Armaflex)	Water collector extended by 300 mm
Y	Stainless steel	6 mm thick (Class 0 Armaflex)	Water collector extended by 300 mm

Note: Cold-rolled sheets are painted with epoxy resin. Stainless steel water collectors are made of 304 stainless steel.

**Specifications (two-pipe with 2 Rows of Coils)**

		Model	EKCW 200ATD	EKCW 300ATD	EKCW 400ATD	EKCW 500ATD	EKCW 600ATD	EKCW 800ATD	EKCW 1000ATD	EKCW 1200ATD
Performance										
Rated air flow (m <sup>3</sup> /h; under static pressure of 12 Pa and 30 Pa)	H		340	510	680	850	1020	1360	1700	2040
	M		279	418	558	697	836	1115	1394	1673
	L		170	255	340	425	510	680	850	1020
Rated cooling capacity (W)	Total heating/cooling capacity	H	1770	2955	3920	4635	5115	7610	8680	10495
	Sensible heating/cooling capacity	H	1140	1980	2570	3205	3735	5535	6680	7765
Rated heating capacity (W)		H	3280	5120	6450	7560	9095	12830	15865	18485
Rated input power (W)	Static pressure of 12 Pa	H	23	34	41	53	68	97	120	156
		M	16	22	27	36	45	65	80	100
		L	8	11	14	18	23	33	41	39
	Static pressure of 30 Pa	H	31	42	57	65	84	112	144	182
		M	19	27	36	41	53	71	91	111
		L	10	14	19	22	28	37	48	60
Working current (A)	Static pressure of 12 Pa	H	0.11	0.16	0.20	0.25	0.32	0.46	0.57	0.75
	Static pressure of 30 Pa	H	0.15	0.20	0.27	0.31	0.40	0.53	0.68	0.86
Noise dB(A)	Static pressure of 12 Pa	H	34.5	34.5	37.5	41.0	45.0	44.5	48.0	49.0
	Static pressure of 30 Pa	H	37.0	40.0	42.5	44.0	45.5	46.5	49.5	49.5
Noise dB(A) in sleep mode	Static pressure of 12 Pa	H	18.5	20.5	22.5	22.0	28.0	29.5	32.5	33.5
	Static pressure of 30 Pa	H	20.0	24.0	25.5	25.5	25.0	30.5	33.0	32.0
Water flow (m <sup>3</sup> /h)			0.32	0.51	0.67	0.80	0.88	1.31	1.47	1.81
Water resistance (cooling) (kPa)			5	14	26	36	18	40	28	40
Water resistance (heating) (kPa)			4	12	21	30	14	34	23	34
Coil	Type	Shutter-type hyperbolic and hydrophilic fins made from mechanically expanded quality copper tubes specially designed for air conditioners								
	Working pressure	1.6MPa								
	Test pressure	Airtightness test under pressurized water: 3.3 MPa								
Fan	Type	Forward-pitched multi-wing centrifugal fan with double-suction impellers made from zinc-plated steel plates								
	Qty.	1	2	2	2	2	3	4	4	4
Motor	Type	Ball-bearing brushless DC motor with a high precision and low noise								
	Qty.	1	1	1	1	1	1	2	2	2
	Power supply	220V~/50Hz								
	Protection grade	IP20								
	Insulation grade	B								
Inlet/outlet water pipe	Pipe diameter	Rc 3/4 taper pipe with internal threads								
Condensate water pipe	Pipe diameter	R 3/4 Taper pipe with external threads								
Net weight	No return air plenum	kg	10.4	12.3	14.6	15.4	16.2	24.4	27.1	29.4
	With return air plenum	kg	13.4	15.9	18.6	19.7	20.8	30.4	33.5	36.6

Notes:

- Cooling capacity is measured under working conditions where the temperature of inlet air dry/wet bulb is 27°C/19.5°C and the temperature of inlet/outlet water is 7°C/12°C.
- Heating capacity is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the water flow is equal to that for cooling operation.
- Rated air flow is measured under standard atmosphere using dry coils (the temperature of dry bulb is 20°C).
- Sound pressure grade and noise level are measured in a semi-silent room as per GB/T 19232-2003.
- Sleep mode: In auto control mode, the unit can use the control logic to determine whether to enter the sleep mode based on the real-time load of the room.
- H, M, and L indicate high, medium, and low fan speed respectively.
- Static pressure refers to the outlet static pressure of the unit.
- All performance parameters in the preceding table are measured with a power supply of 220V~/50Hz.
- The left/right orientation of connection pipes is exchangeable on site (cooling/heating capacity needs to be multiplied by a correction factor of 0.93 after exchange).

**Specifications (two-pipe with 3 Rows of Coils)**

		Model	EKCW 200ACD	EKCW 300ACD	EKCW 400ACD	EKCW 500ACD	EKCW 600ACD	EKCW 800ACD	EKCW 1000ACD	EKCW 1200ACD
Performance										
Rated air flow (m <sup>3</sup> /h; under static pressure of 12 Pa and 30 Pa)	H		340	510	680	850	1020	1360	1700	2040
	M		279	418	558	697	836	1115	1394	1673
	L		170	255	340	425	510	680	850	1020
Rated cooling capacity (W)	Total heating/cooling capacity	H	2260	3480	4490	5140	6450	8490	10030	11540
	Sensible heating/cooling capacity	H	1490	2170	2870	3600	4370	6080	7110	8500
Rated heating capacity (W)		H	3610	5480	7050	7900	9770	13210	16230	18160
Rated input power (W)	Static pressure of 12 Pa	H	23	34	41	53	68	97	120	156
		M	16	22	27	36	45	65	80	100
		L	8	11	14	18	23	33	41	39
	Static pressure of 30 Pa	H	31	42	57	65	84	112	144	182
		M	19	27	36	41	53	71	91	111
		L	10	14	19	22	28	37	48	60
Working current (A)	Static pressure of 12 Pa	H	0.11	0.16	0.20	0.25	0.32	0.46	0.57	0.75
	Static pressure of 30 Pa	H	0.15	0.20	0.27	0.31	0.40	0.53	0.68	0.86
Noise dB(A)	Static pressure of 12 Pa	H	34.5	35.0	36.5	41.5	44.5	44.5	47.5	48.5
	Static pressure of 30 Pa	H	37.0	39.0	42.0	43.0	46.0	45.5	50.0	50.0
Noise dB(A) in sleep mode	Static pressure of 12 Pa	H	25.5	18.0	20.5	22.0	27.0	28.5	32.0	32.5
	Static pressure of 30 Pa	H	22.8	23.0	24.5	23.5	26.0	27.5	33.5	31.5
Water flow (m <sup>3</sup> /h)			0.44	0.61	0.74	0.96	1.10	1.54	1.75	2.10
Water resistance (cooling) (kPa)			13	30	17	24	36	36	29	40
Water resistance (heating) (kPa)			11	23	13	20	29	31	22	37
Coil	Type	Shutter-type hyperbolic and hydrophilic fins made from mechanically expanded quality copper tubes specially designed for air conditioners								
	Working pressure	1.6MPa								
	Test pressure	Airtightness test under pressurized water: 3.3 MPa								
Fan	Type	Forward-pitched multi-wing centrifugal fan with double-suction impellers made from zinc-plated steel plates								
	Qty.	1	2	2	2	2	3	4	4	
Motor	Type	Ball-bearing brushless DC motor with a high precision and low noise								
	Qty.	1	1	1	1	1	2	2	2	
	Power supply	220V~/50Hz								
	Protection grade	IP20								
	Insulation grade	B								
Inlet/outlet water pipe	Pipe diameter	Rc 3/4 taper pipe with internal threads								
Condensate water pipe	Pipe diameter	R 3/4 Taper pipe with external threads								
Net weight	No return air plenum	kg	11.1	13.3	15.7	16.6	17.6	26.4	29.2	31.8
	With return air plenum	kg	14.1	16.9	19.7	20.9	22.2	32.4	35.6	39.0

Notes:

- Cooling capacity is measured under working conditions where the temperature of inlet air dry/wet bulb is 27°C/19.5°C and the temperature of inlet/outlet water is 7°C/12°C.
- Heating capacity is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the water flow is equal to that for cooling operation.
- Rated air flow is measured under standard atmosphere using dry coils (the temperature of dry bulb is 20°C).
- Sound pressure grade and noise level are measured in a semi-silent room as per GB/T 19232-2003.
- Sleep mode: In auto control mode, the unit can use the control logic to determine whether to enter the sleep mode based on the real-time load of the room.
- H, M, and L indicate high, medium, and low fan speed respectively.
- Static pressure refers to the outlet static pressure of the unit.
- All performance parameters in the preceding table are measured with a power supply of 220V~/50Hz.
- The left/right orientation of connection pipes is exchangeable on site (cooling/heating capacity needs to be multiplied by a correction factor of 0.93 after exchange).

**Specifications (four-pipe with 2+1 Rows of Coils)**

		Model	EKCW 200AMD	EKCW 300AMD	EKCW 400AMD	EKCW 500AMD	EKCW 600AMD	EKCW 800AMD	EKCW 1000AMD	EKCW 1200AMD
Performance										
Rated air flow (m <sup>3</sup> /h; under static pressure of 12 Pa and 30 Pa)	H	340	510	680	850	1020	1360	1700	2040	
	M	279	418	558	697	836	1115	1394	1673	
	L	170	255	340	425	510	680	850	1020	
Rated cooling capacity (W)	Total heating/cooling capacity	H 1687	2642	3413	4105	4690	6620	7712	9350	
	Sensible heating/cooling capacity	H 1112	1843	2496	3071	3676	5002	6162	7254	
Rated cooling capacity (W) (chilled water coil)		H	3081	4505	5889	7283	8590	11437	14186	16653
Rated heating capacity ① (W) (hot water coil)			2360	3393	4397	5216	6182	7985	9672	11174
Rated heating capacity ② (W) (hot water coil)			3286	4856	6279	7391	8726	11242	13640	15834
Rated input power (W)	Static pressure of 12 Pa	H	23	34	41	53	68	97	120	156
		M	16	22	27	36	45	65	80	100
		L	8	11	14	18	23	33	41	39
	Static pressure of 30 Pa	H	31	42	57	65	84	112	144	182
		M	19	27	36	41	53	71	91	111
		L	10	14	19	22	28	37	48	60
Working current (A)	Static pressure of 12 Pa	H	0.11	0.16	0.20	0.25	0.32	0.46	0.57	0.75
	Static pressure of 30 Pa	H	0.15	0.20	0.27	0.31	0.40	0.53	0.68	0.86
Noise dB(A)	Static pressure of 12 Pa	H	34.5	35.0	36.5	41.5	44.5	44.5	47.5	48.5
	Static pressure of 30 Pa	H	37.0	39.0	42.0	43.0	46.0	45.5	50.0	50.0
Noise dB(A) in sleep mode	Static pressure of 12 Pa	H	25.5	18.0	20.5	22.0	27.0	28.5	32.0	32.5
	Static pressure of 30 Pa	H	22.8	23.0	24.5	23.5	26.0	27.5	33.5	31.5
Chilled water coil	Water flow (m <sup>3</sup> /h)		1.33	1.50	1.63	1.75	1.85	2.18	2.36	2.67
	Water resistance (cooling) (kPa)		5	12	19	29	14	31	22	36
	Water resistance (heating) (kPa)		4	10	16	24	11	26	18	29
Hot water coil	Water flow ① (m <sup>3</sup> /h)		0.21	0.30	0.39	0.46	0.55	0.71	0.85	0.98
	Water resistance (heating) ① (kPa)		7	14	25	35	52	17	26	37
	Water flow ② (m <sup>3</sup> /h)		0.13	0.20	0.25	0.30	0.36	0.46	0.55	0.64
	Water resistance (heating) ② (kPa)		3	7	11	16	23	8	11	17
Coil	Type	Shutter-type hyperbolic and hydrophilic fins made from mechanically expanded quality copper tubes specially designed for air conditioners								
	Working pressure	1.6MPa								
	Test pressure	Airtightness test under pressurized water: 3.3 MPa								
Fan	Type	Forward-pitched multi-wing centrifugal fan with double-suction impellers made from zinc-plated steel plates								
	Qty.	1	2	2	2	2	3	4	4	
Motor	Type	Ball-bearing brushless DC motor with a high precision and low noise								
	Qty.	1	1	1	1	1	2	2	2	
	Power supply	220V~/50Hz								
	Protection grade	IP20								
	Insulation grade	B								
Inlet/outlet water pipe	Pipe diameter	Rc 3/4 taper pipe with internal threads								
Condensate water pipe	Pipe diameter	R 3/4 Taper pipe with external threads								
Net weight	No return air plenum	kg	11.1	13.3	15.7	16.6	17.6	26.4	29.2	31.8
	With return air plenum	kg	14.1	16.9	19.7	20.9	22.2	32.4	35.6	39.0

Notes:

- Cooling capacity (chilled water coil) is measured under working conditions where the temperature of inlet air dry/wet bulb is 27°C/19.5°C and the temperature of inlet/outlet water is 7°C/12°C.
- Heating capacity (chilled water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the water flow is equal to that for cooling operation.
- Heating capacity ① (hot water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the temperature of outlet water is 50°C.
- Heating capacity ② (hot water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 82.2°C, and the temperature of outlet water is 60°C.
- Rated air flow is measured under standard atmosphere using dry coils (the temperature of dry bulb is 20°C).
- Sound pressure grade and noise level are measured in a semi-silent room as per GB/T 19232-2003.
- Sleep mode: In auto control mode, the unit can use the control logic to determine whether to enter the sleep mode based on the real-time load of the room.
- H, M, and L indicate high, medium, and low fan speed respectively.
- Static pressure refers to the outlet static pressure of the unit.
- All performance parameters in the preceding table are measured with a power supply of 220V~/50Hz.

**Specifications (four-pipe with 3+1 Rows of Coils)**

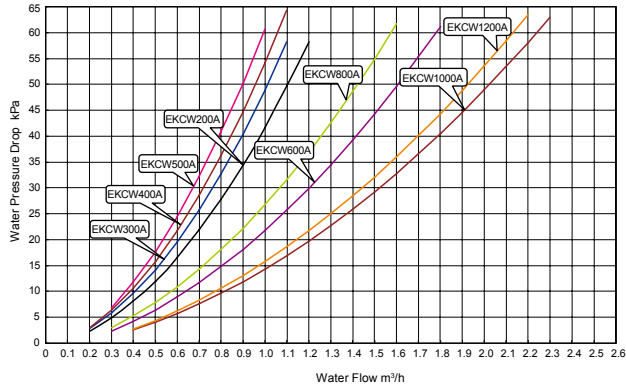
		Model	EKCW 200AHD	EKCW 300AHD	EKCW 400AHD	EKCW 500AHD	EKCW 600AHD	EKCW 800AHD	EKCW 1000AHD	EKCW 1200AHD
Performance										
Rated air flow (m <sup>3</sup> /h; under static pressure of 12 Pa and 30 Pa)	H		340	510	680	850	1020	1360	1700	2040
	M		279	418	558	697	836	1115	1394	1673
	L		170	255	340	425	510	680	850	1020
Rated cooling capacity (W)	Total heating/cooling capacity	H	2530	3310	4240	5000	5890	8040	9290	11820
	Sensible heating/cooling capacity	H	1490	2100	2850	3350	4040	5520	6730	8300
Rated cooling capacity (W) (chilled water coil)		H	4180	5300	7030	7920	9890	13120	16120	20150
Rated heating capacity ① (W) (hot water coil)			2450	3170	4090	4470	5690	7290	8790	11610
Rated heating capacity ② (W) (hot water coil)			3330	4240	5800	6670	7970	10200	12270	16420
Rated input power (W)	Static pressure of 12 Pa	H	23	34	41	53	68	97	120	156
		M	16	22	27	36	45	65	80	100
		L	8	11	14	18	23	33	41	39
	Static pressure of 30 Pa	H	31	42	57	65	84	112	144	182
		M	19	27	36	41	53	71	91	111
		L	10	14	19	22	28	37	48	60
Working current (A)	Static pressure of 12 Pa	H	0.11	0.16	0.20	0.25	0.32	0.46	0.57	0.75
	Static pressure of 30 Pa	H	0.15	0.20	0.27	0.31	0.40	0.53	0.68	0.86
Noise dB(A)	Static pressure of 12 Pa	H	33.5	32.5	38.5	41.5	44.5	45.0	48.0	49.0
	Static pressure of 30 Pa	H	39.5	40.0	43.0	44.0	46.0	46.0	50.5	50.5
Noise dB(A) in sleep mode	Static pressure of 12 Pa	H	18.9	19.0	23.1	21.5	29.1	30.7	32.0	32.8
	Static pressure of 30 Pa	H	20.9	23.3	26.8	25.0	28.3	30.4	35.9	33.8
Chilled water coil	Water flow (m <sup>3</sup> /h)		0.44	0.57	0.73	0.88	1.03	1.41	1.62	2.04
	Water resistance (cooling) (kPa)		14	29	17	24	33	34	26	44
	Water resistance (heating) (kPa)		11	21	13	21	26	27	21	36
Hot water coil	Water flow ① (m <sup>3</sup> /h)		0.21	0.27	0.35	0.38	0.49	0.63	0.75	0.97
	Water resistance (heating) ① (kPa)		7	14	22	28	54	15	21	40
	Water flow ② (m <sup>3</sup> /h)		0.13	0.17	0.23	0.26	0.31	0.40	0.48	0.63
	Water resistance (heating) ② (kPa)		3	6	10	14	20	7	10	18
Coil	Type	Shutter-type hyperbolic and hydrophilic fins made from mechanically expanded quality copper tubes specially designed for air conditioners								
	Working pressure	1.6MPa								
	Test pressure	Airtightness test under pressurized water: 3.3 MPa								
Fan	Type	Forward-pitched multi-wing centrifugal fan with double-suction impellers made from zinc-plated steel plates								
	Qty.	1	2	2	2	2	3	4	4	
Motor	Type	Ball-bearing brushless DC motor with a high precision and low noise								
	Qty.	1	1	1	1	1	2	2	2	
	Power supply	220V~/50Hz								
	Protection grade	IP20								
	Insulation grade	B								
Inlet/outlet water pipe	Pipe diameter	Rc 3/4 taper pipe with internal threads								
Condensate water pipe	Pipe diameter	R 3/4 Taper pipe with external threads								
Net weight	No return air plenum	kg	11.8	14.3	16.8	17.9	19.1	28.4	31.4	34.3
	With return air plenum	kg	14.8	17.9	20.8	22.2	23.7	34.4	37.8	41.5

Notes:

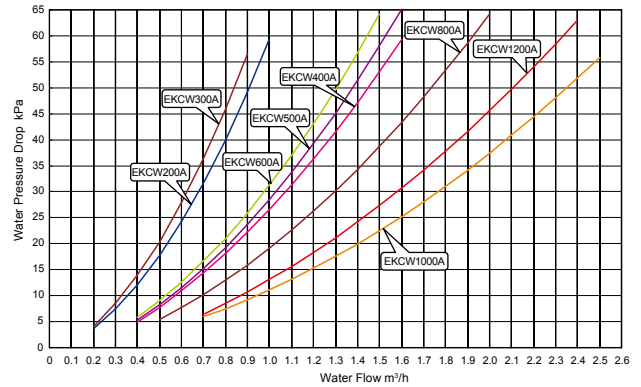
- Cooling capacity (chilled water coil) is measured under working conditions where the temperature of inlet air dry/wet bulb is 27°C/19.5°C and the temperature of inlet/outlet water is 7°C/12°C.
- Heating capacity (chilled water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the water flow is equal to that for cooling operation.
- Heating capacity ① (hot water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 60°C, and the temperature of outlet water is 50°C.
- Heating capacity ② (hot water coil) is measured under working conditions where the temperature of inlet air dry bulb is 21°C, the temperature of inlet water is 82.2°C, and the temperature of outlet water is 60°C.
- Rated air flow is measured under standard atmosphere using dry coils (the temperature of dry bulb is 20°C).
- Sound pressure grade and noise level are measured in a semi-silent room as per GB/T 19232-2003.
- Sleep mode: In auto control mode, the unit can use the control logic to determine whether to enter the sleep mode based on the real-time load of the room.
- H, M, and L indicate high, medium, and low fan speed respectively.
- Static pressure refers to the outlet static pressure of the unit.
- All performance parameters in the preceding table are measured with a power supply of 220V~/50Hz.

Curve for Water Pressure Drop

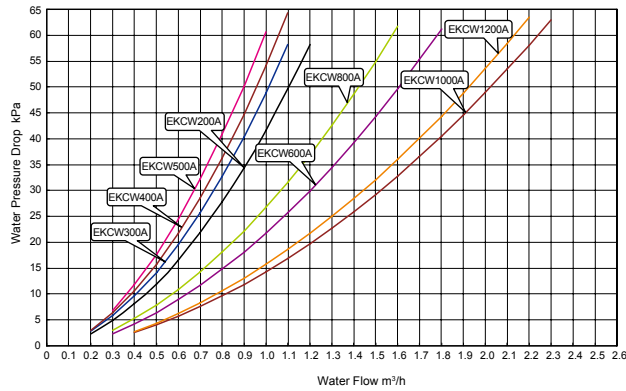
**EKCW-ATD**



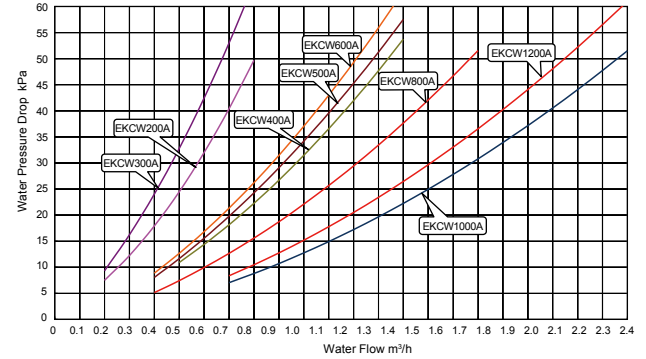
**EKCW-ACD**



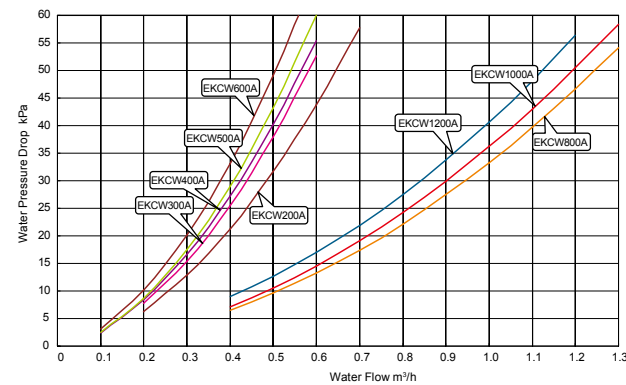
**EKCW-AMD (chilled water coil)**



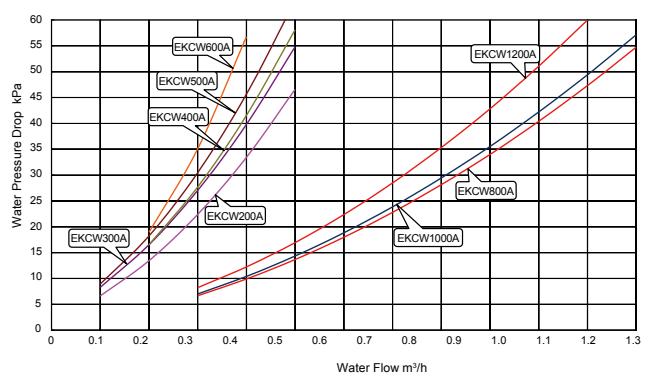
**EKCW-AHD (chilled water coil)**



**EKCW-AMD (hot water coil)**

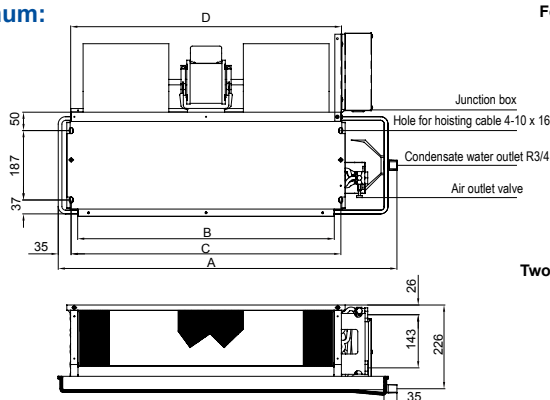


**EKCW-AHD (hot water coil)**

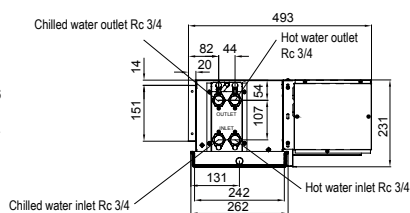


Dimensions of the unit

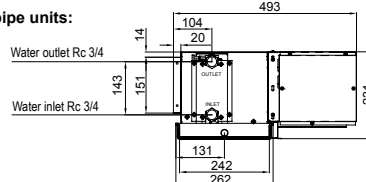
No return air plenum:



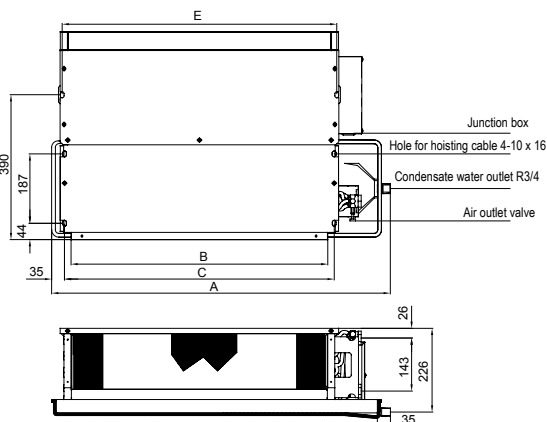
Four-pipe units:



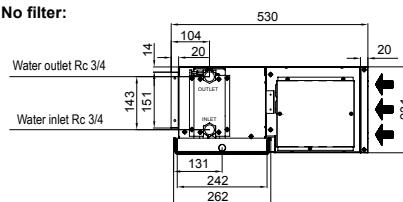
Two-pipe units:



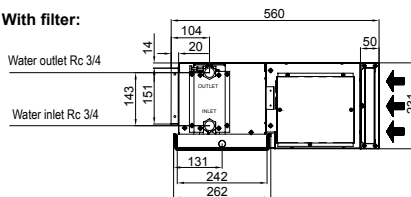
With backward return air plenum:



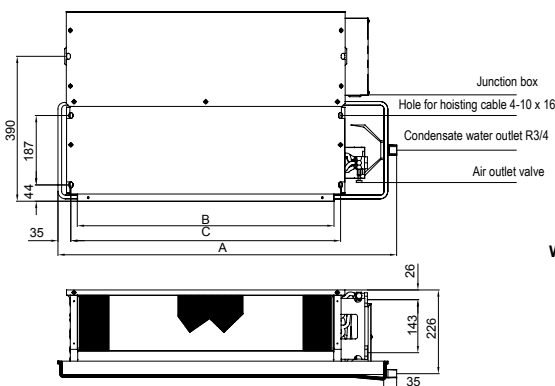
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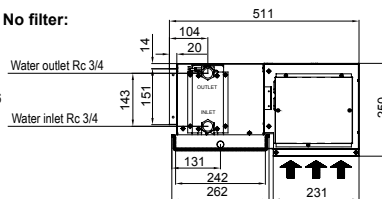
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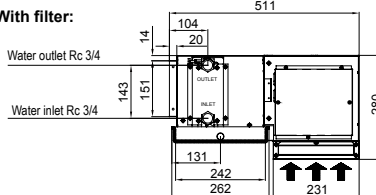
With downward return air plenum:



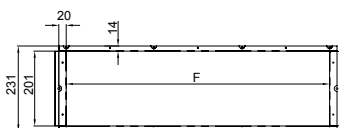
No filter:



With filter:



Size of return air inlet  
(backward air return/downward air return)



- In the preceding unit, the water pipe is connected on the right side.
- In the preceding table, code A indicates an extended water collector, which is 100 mm longer than a standard condensate water collector

Unit: mm

Model	A		B	C	D	E	F	Qty. of Fans
	Standard Water Collector	Extended Water Collector (B)						
EKCW200A	675	775	452	487	490	520	470	1
EKCW300A	815	915	592	627	630	660	610	2
EKCW400A	915	1015	692	727	730	760	710	2
EKCW500A	995	1095	772	807	810	840	790	2
EKCW600A	1095	1195	872	907	910	940	890	2
EKCW800A	1425	1525	1202	1237	1240	1270	1220	3
EKCW1000A	1525	1625	1302	1337	1340	1370	1320	4
EKCW1200A	1725	1825	1502	1537	1540	1570	1520	4
EKCW1400A	1985	2085	1762	1797	1800	1830	1780	4



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